

BIBLIOGRAPHY

C. FITZHUGH TALMAN, in Charge of Library

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Bartels, J.

Überblick über die Physik der hohen Atmosphäre. Vortrag, gehalten am 21. Sept. 1932 auf der Tagung der Heinrich-Hertz-Gesellschaft in Bad Nauheim. Berlin. 1933. 40 p. figs. 30 cm. (Elek.-Nachr.-Tech. Bd. 10. Sonderheft.) Verdunstung, Bodenfeuchtigkeit und Sickerwasser unter natürlichen Verhältnissen. p. 204-219. figs. 23½ cm. (Sonderab.: Ztschr. für Forst- und Jagdwesen. 65. Jahrg. April 1933.)

Baur, Franz.

Die interdiurne Veränderlichkeit des Luftdrucks als Hilfsmittel der indirekten Aerologie. Frankfurt a. M. 1933. p. 21-28. charts. 30 cm. (Synopt. Bearbeit. mitgeteilt von der Wetterdienstst. Frankfurt a. M. Nr. 4.)

Commission de météorologie agricole.

Procès-verbaux des séances de Munich, 19-21 Septembre 1932. Utrecht. 1933. 162 p. figs. pl. 24½ cm. (Sec. de l'Organ. mét. internat. No. 14.)

Friedrich, Wilhelm.

Messungen des Wasserhaushalts im Erdboden. p. 253-254. 30 cm. (Forschungen und Fortschr. Berlin. 9. Jahrg. 10. Juni 1933.)

Über die Verdunstung vom bewachsenen und unbewachsenen Erdboden. (Ergebnisse der Lysimetermessungen in Eberswalde in den Abflussjahren 1930 und 1931.) unp. fig. 31 cm. (Sonderdr.: Deutsche Wasserwirtschaft. H. 4. 1933.)

Heinen, Anton.

Thunderstorms and airships. p. 8-9, 18. illus. 30½ cm. (Nat. aeron. mag., v. 11, no. 5, May 1933.)

Herchenroder, M.

Cyclone season 1930-31 at Mauritius. n.p. n.d. 5 p. pl. 34 cm. (Misc. pub. Royal Alfred observ. No. 13.)

Hilpert, Rudolf.

Verdunstung und Wärmeübergang an senkrechten Platten in ruhender Luft. Berlin. 1932. 22 p. figs. 30 cm. (Forschung Gebiete des Ingenieurwesens. Ausgabe B. Bd. 3. Juli-Aug. 1932. Forschungsheft 355.)

Hoyt, John C.

Drought of 1930. p. 1822-1864. figs. 24 cm. (Repr.: Journ. Amer. waterworks assoc. v. 23, no. 11, Nov. 1931.)

Institute of the aeronautical sciences, inc.

Proceedings of the founder's meeting . . . held at Columbia university, New York, January 26, 1933. Membership list 1933. New York. 1933. 85 p. 24 cm.

International commission for the study of clouds.

Atlas international des nuages et des états du ciel; extrait de l'ouvrage complet, à l'usage des observateurs. Paris. 1932. 41 p. illus. (chart). 41 pl. (part col.) 31 cm.

Kirsten, Herbert.

Technische Wind-Messungen. unp. figs. 29½ cm. (Archiv für tech. Messen. Bd. 2. Lfg. 18. München, 30, 12, 1932.) (Photostated.)

Koehne, W.

Messungen des Grundwasserstandes in Norddeutschland in den letzten Jahrzehnten. p. 326-334. figs. 24½ cm. (Sonder-Abd. Archiv für Hydrobiol. Bd. 25, 1933.)

Kühne, Werner.

Einfluss der Windrichtungen auf Niederschlag und Abfluss dargestellt an den Verhältnissen des Oderteiches im Harz. Borna-Leipzig. 1932. 70 p. illus. pl. (fold.) 21 cm. (Dissert. Tech.-Hochsch. zu Hannover.)

Nukiyama, Daizo, & Kobayasi, Atsusi.

On the transmissibility of visible light through a cloud of particles. pt. 1-2. 18, p. 307-338. figs. 26½ cm. (Rep. Aeron. res. inst., Tôkyô imp. univ. No. 82. Aug. 1932. No. 92. Feb. 1933. (vol. 7, I-II.))

Simpson, G. C.

Physics in meteorology. London. [1933.] 22 p. figs. 25 cm. (Physics in industry. Lecture no. 18. Given before the Inst. of physics Nov. 2, 1932.)

Tollmien, W.

Die Kármánsche Ähnlichkeitshypothese in der Turbulenztheorie und das ebene Windschattenproblem. 15 p. figs. 27½ cm. (Ingenieur-Archiv. 4. Bd. 1933.)

Willett, H. C.

American air mass properties. Cambridge. 1933. 116 p. figs. map. 28 cm. (Papers in phys. ocean. & met., pub. by Mass. inst. tech., & Woods Hole oceanogr. inst. (In contin. Mass. inst. tech. met. papers. v. 2, no. 2.)

SOLAR OBSERVATIONS

SOLAR RADIATION MEASUREMENTS DURING JUNE 1933

By IRVING F. HAND, Assistant in Solar Radiation Investigations

For a description of instruments employed and their exposures, the reader is referred to the January 1932, REVIEW, page 26.

Beginning with June 1933 values of the total solar radiation (direct+diffuse) as received at Riverside, Calif. (altitude 1,070 feet above sea level, latitude 33° 58' north, longitude 117° 20' west) will be included in table 2 through the courtesy and cooperation of Dr. E. R. Parker of the College of Agriculture, University of California.

Table 1 shows that solar radiation intensities averaged above normal for the three Weather Bureau stations at which normal incidence measurements are made. Observations have not been taken long enough at the Blue Hill Observatory to derive normals.

Table 2 shows a decided excess in the total solar and sky radiation received on a horizontal surface at all stations except Twin Falls, La Jolla, and Gainesville.

Table 3 shows low values of turbidity on the 14th only, with the exception of the very early morning readings of the 15th.

Polarization observations obtained at Washington on 4 days give a mean of 46 percent with a maximum of 52

percent on the 14th. At Madison, observations taken on 9 days give a mean of 60 percent with a maximum of 71 percent on the 13th. The values for Washington are below normal for June, while those at Madison are somewhat above normal.

TABLE 1.—Solar-radiation intensities during June 1933

[Gram-calories per minute per square centimeter of normal surface]

WASHINGTON, D.C.

Date	Sun's zenith distance										Local mean solar time	
	8 a.m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°		
	75th mer. time	Air mass										
	e.	5.0	4.0	3.0	2.0	1.0 ¹	2.0	3.0	4.0	5.0		
June 2	mm	cal	cal	cal	cal	cal	cal	cal	cal	cal	mm 4.37	
June 7	5.16				1.10	1.21	1.49	1.20			18.59	
June 7	17.37	0.35	0.48	.61	.80						22.00	
June 9	22.76		.54								15.11	
June 12	16.79			.67	.84						5.16	
June 14	6.27		.88	1.04	1.25	fi					5.79	
June 15	6.27	.72	.82	.98	1.12						17.96	
June 21	14.60		.40	.60	.75	1.20					10.21	
June 23	10.97				1.00						10.21	
June 24	13.13							1.19			10.21	
Means	(.54)	.62	.83	1.00	1.29	(1.20)						
Departures	-0.04	-0.04	+0.05	+0.06	+0.05	+0.26						

¹ Extrapolated.